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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/176,124	10/21/98	SCHNEIDER	G 10191/857

026646  
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IM52/0518

EXAMINER

TUNG, T

ART UNIT

PAPER NUMBER

1743

12

DATE MAILED: 05/18/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

**Office Action Summary**

Application No.	09/176,124	
Examiner	SCHNEIDER T. TUNG	
		Applicant(s) SCHNEIDER T. TUNG
		Group Art Unit 743
		Paper No. 17

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication .
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

**Status**

Responsive to communication(s) filed on 4-9-01

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

**Disposition of Claims**

Claim(s) 1-7 is/are pending in the application.

Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1-7 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

**Application Papers**

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119 (a)-(d)**

Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

**Attachment(s)**

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_  Interview Summary, PTO-413

Notice of Reference(s) Cited, PTO-892  Notice of Informal Patent Application, PTO-152

Notice of Draftsperson's Patent Drawing Review, PTO-948  Other \_\_\_\_\_

**Office Action Summary**

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Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The expressions "electrically functioning layer" and "electrically non-functioning layer" at lines 4 and 5 of claim 1 are vague. It is not evident what constitutes each of these layers. For instance, in the Schneider '677 patent, would layer 44 of fig. 5 be an electrically functioning layer? Note that this layer is set forth by the patent at col. 3, lines 36-40 as part of the Nerst cell in that it serves to channel a reference gas to the reference electrode. Would this function make layer 44 an "electrically functioning layer"? Another example would be layer 22 of the Schneider patent described at col. 2, lines 45-48 as having a function of stabilizing the sensor. Would that function make layer 22 an "electrically functioning layer"? Yet another example would be an insulating layer. At first blush, an insulating layer would presumably be an "electrically non-functioning layer" because no electrical current is passed. But, it can be argued that insulation serves to block electrical current and thus serves an "electrical function".

This rejection is prompted by applicant's April 9, 2001 response setting forth the "electrically functioning layer" and the "electrically non-functioning layer".

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneider et al '677.

In Schneider element 22 of figure 3 can be considered to be an "electrically functioning layer" since it serves to stabilize the sensor. See col. 2, lines 45-48. Note that the heater layer 27

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is disposed about half way between layer 22 and cover layer 29, which together can be regarded as the “layer structure”. The presence of further layers in addition to the layer structure or the presence of further layers in the layer structure is not excluded by applicant’s claim language. Since the heater is located at about the mid-point in the layer structure, it would presumably provide at least approximately homogeneous distribution of heating power over a perpendicular cross-section of the layer structure.

Alternatively, layer 44 in figure 5 of the patent can be considered to be an “electrically functioning layer” since it serves to channel reference gas to the reference electrode 42. Heater 27 is located about half way up a layer structure comprising layer 44 and cover layer 29 and thus presumably would provide at least approximately homogenous distribution of heating power for the layer structure.

This rejection is prompted by applicant’s April 9, 2001 response calling for the “electrically functioning layer” and “electrically non-functioning layer”.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Mase et al ‘274.

Mase discloses a sensor layer 12, a spacer layer 8 and a heater layer 36 about half way between them. See figures 9 and 10; col. 8, line 43 to col. 9, line 33. Spacer layer 8 is considered to meet the term “electrically non-functioning layer”, since it does not appear to carry out any electrical function. Layers 12, 18 and 36 can be regarded as the “layer structure”. Heater 36 would provide at least approximately homogeneous heating power distribution in the layer structure because it is located at the mid-point thereof.

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This rejection is prompted by applicant's April 9 response.

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Mase et al '364.

Mase discloses a sensor layer 216, a cover layer 238 and a heater layer 234 about half way between them. See figures 16 and 17; col. 18, line 60 to col. 22, line 65. These three layers can be regarded to constitute a "layer structure". The heater layer would presumably provide at least approximately homogeneous heating power distribution in the layer structure, since it is located at about the mid-point thereof.

This rejection is prompted by applicant's April 9 response.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al in view of Yamada '806 or Yamada '807.

Applicant argues that there is no teaching from the prior art as to the advantages of locating the heater half way between the extremities of the sensor. Thus, there is no motivation to combine the references.

This argument is not persuasive. It would have been readily obvious to one of ordinary skill in the art that if a heater is located at one extremity, that extremity would receive a larger and disproportionate amount of heat compared to the other extremity. That would simply be common sense. Correspondingly, if the heater is located at the mid-point, both extremities would receive about equal amount of heat. Thus, there is nothing unexpected in the benefits achieved by applicant in locating the heater at the half way point.

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It is noted in claim 3, lines 4, 5, 7, the terms “function layer-side” and “cover foil-side” are awkward. Better language would be to delete “function layer-side” at line 4, delete “cover foil-side” at line 5, change “cover foil-side” at lines 5-6 to --covering layer--, and change “function layer-side” at line 7 to --electrically functioning layer--.

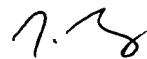
In claim 1, last line, it would appear that the cross-section should be specified as to its direction. A cross-section perpendicular to the plane of the layer structure is not the same as a cross-section parallel to the plane.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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The examiner can be reached at 703-308-3329. His supervisor Jill Warden can be reached at 703-308-4037. Any general inquiry should be directed to the receptionist at 703-308-0661. A fax number for TC 1700 is 703-872-9310.



Ta Tung

Primary Examiner

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